

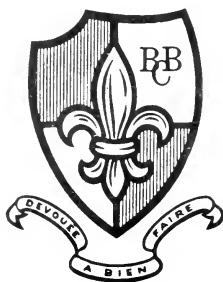
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THE OLYMPIC GAMES IN ANCIENT TIMES.*

EDWARD M. PLUMMER.

historic times the great national festivals were already established. They had undoubtedly grown out of local athletic festivals of very ancient origin. Of these Panhellenic festivals, that held once in every four years at Olympia in Elis was the grandest and the greatest. The nationalization of this festival is ascribed traditionally to the year 776 B. C. This date depends on the list of Olympic victors, compiled in the last part of the fifth century by the sophist Hippias of Elis, and handed down by Eusebios. Historians are not unanimous in accepting the early part of the register, and the minority have supported their charge of falseness by adducing unharmonious facts. In itself the date 776 B. C. is not unreasonable. And when it is considered how actively easy and common travel was in Hellas, it is not rash to suppose that the festival, when once it had become celebrated as a national affair was resorted to by travellers, if not as participants, at least as spectators. Certain it is that the Olympic festival was established as a Panhellenic institution, when the other three festivals were established early in the sixth century, and that to the close of history it continued the most glorious.

Pythian games were celebrated on the Krissean Plain in honor of Apollo. These games were held for several

The first paper on athletic games among the Homeric heroes was published in the REVIEW for December, 1897.

days in January in the third year of each Olympiad. The prize was a wreath of laurel and a palm.

The Nemean games were held in the groves of Nemea, near Kleonai in Argolis, in the winter and summer alternately of the second and fourth years of each Olympiad. The prize was a wreath of parsley.

The Isthmian games, instituted in honor of Poseidon, took place at Corinth in the spring and summer alternately of the first and third years of each Olympiad. This alternation was arranged to avoid interference with the Olympian and Pythian festivals. The victor's prize at the Isthmia was a wreath of pine native to the spot.

Beside the four national festivals, minor games of more frequent recurrence existed all over Hellas. How eagerly the victor in a local exhibition must have turned his eyes towards Nemea, the Isthmus, Pytho, and perhaps even to Olympia may be imagined. Each of the four great festivals had peculiar features of its own. Thus, the Pythian games, probably next to the Olympian in importance, were characterized by competitions in music and poetry in addition to the athletic contests. The Isthmian games were distinguished by the addition of boat-racing and swimming contests.

But all were essentially alike. All were designed as glorifications of the strong and agile body. All were marked with patriotism. All were embellished with the greatest products of Hellenic art. All were held in honor of gods. And a fitting tribute and worship they furnished, not the mumbled prayers of a sallow-visaged, stunted race, but the exultant feats of proud, self-reliant men. All were attended by the most studied and artistic pomp. The greatest lyric poets of Hellas, Simonides and Pindar, for instance, celebrated the victors. Of Pindar's *ἐπινίκια* or "Odes of Victory," we possess fourteen *Ὀλυμπιονίκαι* for winners in the Olympian games. Twelve *Πυθιονίκαι* for the Pythian games, seven *Νεμεονίκαι* for the Nemean games, and eleven *Ἰσθμεονίκαι* for the Isthmian games. Even the wise men and famous bards of Greece could not resist the desire to be present. It is said that the Spartan Chilon, one of the seven wise men of Greece, died while witnessing these games, being overcome with joy at his son's victory. Sages like Pythagoras, Anaxagoras, Sokrates, Plato, Aristippos, Diogenes and Thales came, lured not only by the desire of beholding athletic feats, but also eager to engage in debate, or perhaps to explain some new theory of the universe. Statesmen like Themistokles and Kimon resorted to the games and there met

the rulers of distant states. Orators and sophists like Gorgias, Lysias and Demosthenes, were present at the Olympian games. The first two made great panegyric speeches. The games on the Isthmus were attended by the great dramatists Aischylos and Ion. Historians like Herodotos carried their scrolls to read before assembled Hellas. Artists came to exhibit their works of art, and perhaps to obtain new customers. Sculptors showed models of their skill, and potters exhibited vases. These games, like the Schwingfest and the shooting-matches of Switzerland, served not only as pleasant occasions of reunion, but tended to the diffusion of national ideas. In the language of John Fiske, "young men of the noblest families and from the farthest Greek colonies came to them, and wrestled and ran, undraped, before countless multitudes of admiring spectators."

The victor in the foot-race at Olympia was regarded as an honor to his country, and gave his name to the current Olympiad, and on reaching home entered his native city to the notes of a triumphal song written by a Pindar or Simonides. Another significant fact is that the Greek era began with the Olympic games; every period of four years was called an Olympiad.

About twenty miles above the mouth of the Alpheios, in a long, narrow valley surrounded by well-wooded hills, it is joined by the ancient Kladeos, coming from the north. At the angle formed by the junction of the two rivers is the area known as Olympia, the scene of the greatest athletic festival that the world has ever witnessed.

To the north of this plain was a range of rocky hills, the nearest of which was the famous Kronion, conical in shape and about 400 feet in height. As its name signifies, this hill was sacred to Kronos, the father of Zeus. Another low range bounded the valley on the south. The western boundary was the Kladeos. Eastward was the hill of Pisa, and further in the distance were visible the snow-crowned summits of Erymanthos and Kyllene.

During the long centuries that succeeded the extinction of Greek civilization, the precinct of the games, and the equipments, buildings and statues that remained, were gradually covered by a stratum of alluvium from the Alpheios, mixed with a deposit of clay from Kronion. The rest of the world was not interested enough to record the process, and when in modern times scholars saw no trace of the original scene, it was supposed that the Alpheios by its overflows had destroyed all monuments. Recent excavations, how-

ever, have revealed a very precious remnant at the bottom of the alluvium. It was indeed not really a misfortune that during periods when the products of old civilizations were treated with fanaticism on the one hand, and rapacity on the other, the Olympian scene was covered with earth rather than left exposed to the hand of Middle Age barbarians.

The systematic excavation of Olympia was undertaken in 1875 by the German government. The work involved great expense, and the willingness of the Germans to undertake and execute the task has brought them much praise from the scholars of other countries. The excavations were completed on the 20th of March, 1881.

During these six years a space in the form of a square, measuring 1,000 feet on each side, was stripped of the accumulated deposit of twelve centuries: the average depth of this covering was estimated to be over sixteen feet.

Archæologically, this excavation involved expert care and much labor. Neither the care nor the labor was withheld. The result may best be described in the language of an eminent professor of classical archæology:—

“The result of these excavations, carried on there at great cost and with supreme disinterestedness by the German people, has been to enable the traveller at Olympia not only to study the scene of the greatest of Greek athletic festivals, but to trace the celebration from hour to hour and from point to point. He not only sees the hill of Cronion, where the spectators crowded, wades through Olympic dust, and feels the sun of Olympia beat on his head, but he can wander on the threshold of the temple of Zeus, pass from building to building in the sacred enclosure of the Altis, and stand at the starting-point of the runners in the Stadium. Taking the guide-book of the old Greek traveller Pausanius in our hand, we can follow in his steps, and out of broken pillars, truncated pedestals and the foundations of demolished buildings, we can conjure forth the beautiful Olympia of old, with its glorious temples, its rows of altars, its statues of gods and godlike men who conquered in the games, its treasures full of the noblest works of art and the richest spoils of war. And we can people the solitude with the combatants and with the spectators, a crowd filled with the enthusiasm of the place and with delight in manly contests; a crowd over whom emotions swept as rapidly as chariots through the hippodrome, and who were ever breaking out into wild cries of delight, or loud shouts of scorn

and derision. We can see the bestowal of the crowns of wild olive, and can hear the heralds recite the names of those who have been victorious."

Here, then, in the summer time was held the great athletic festival in honor of Olympian Zeus. At the beginning of authentic history it was already a venerable institution. We have already learned that early in the sixth century the other three Panhellenic festivals were modeled upon it. Many myths very early sprang into existence to explain its origin. Pindar, it is well known, in one of his Olympian odes makes the Dorian Herakles the founder. Of course, the myths do not agree, and if they did would establish nothing directly; indirectly, however, they show that at the time of their first promulgation the festival had attained so approved a system, so wide a celebrity, and so great a prestige as to need accounting for and to be compatible with an exalted origin. And as a matter of fact, system, celebrity and prestige do not fall to the lot of an institution in the period of a single generation.

The festival was from the first under the charge of the Eleians. But so liberal a policy did this nation adopt and pursue that people from neighboring states were glad to send competitors. Rapidly the custom of resorting to the games spread to more distant states. From an Eleian event, the festival became Peloponnesian, and finally Panhellenic. The Athenians and Thebans at a very early date achieved splendid victories in these games. The Theban Pagondas was crowned victor in the four-horse chariot race in the 25th Olympiad, when for the first time this was a feature of the festival. Thus one state after another turned its attention to the venerable celebration, and if it happened that a citizen of one state was crowned victor in a contest, interest in the games was sure to be increased in that locality,

Even in the absence of positive evidence it would be contrary to reason to suppose that the games were originally established as they existed at the time of Pindar. In fact, the different features were added successively. According to a fairly reliable tradition, there was originally and for twelve following Olympiads only one contest: the *δρόμος*, a foot-race consisting of a single lap of a stadion of two hundred yards. About 720 B. C., according to the tradition, was added the *δίανλος*, a race in which the stadion was traversed twice. Soon afterward was added the *δόλιχος*, or long race, consisting of seven, then of twelve and perhaps twenty-four laps. The next contest to be introduced was the wrestling-match. In the same year

that wrestling was introduced, about the 18th Olympiad, the pentathlon made its appearance. This feature, though consisting of five contests — leaping, spear-throwing, diskos-pitching, running and wrestling — was nevertheless a single event, inasmuch as victory in one contest alone was not rewarded; an athlete to be crowned victor in the pentathlon must win at least three of the contests. Boxing and the chariot race are said to have been added in the 23d Olympiad. Thus the games grew more elaborate, and the time over which they extended was increased from a single day to five or six.

The festival was conducted by judges, called Hellanodikai, elected by the people of Elis a year beforehand. The number of these judges was about ten; they were expected to give close attention to their duties. Thirty days before the festival, candidates for the various contests presented themselves before the Hellanodikai for examination. In order that the name of a candidate could be considered, he must prove himself to be of pure Hellenic stock, and must give evidence of having practised in a gymnasium for ten months previously; finally, the candidate must practise for thirty days in the great gymnasium of Elis, under the supervision of the Hellanodikai. The names of those who were able to satisfy the judges were placed on a white board which was exposed to view at Olympia. After an athlete had been entered for a contest, it was considered the greatest ignominy for him to withdraw for any reason; indeed, for so doing he was heavily fined. Theagenes, an athlete of wide fame, was unable to enter the pankration because he had been disabled in the boxing-match; but inasmuch as he had had his name entered for both events, he was fined.

Eleven days before the festival, the Hellanodikai caused to be proclaimed by heralds throughout all the cities of Hellas the truce, sacred to Olympian Zeus, which was to last a month. It was this truce that made the Olympia possible as a Panhellenic institution. During the month that followed the proclamations of the heralds, all wars between Hellenic states were held in abeyance, and travellers were allowed to journey through them unmolested. The awful name of Zeus coupled with the decrees of rulers made this truce effective.

During the eleven days pilgrims from all over Hellas were approaching Olympia. Some of the scenes may be imagined. In the language of Professor Percy Gardner: "From all the shores of the Mediterranean and the Euxine seas the Greek colonies sent depu-

tations to represent them at the games, to bear offerings to the temple, and to perform sacrifices on their behalf. And the Greeks readily took a tinge from the land wherein they dwelt. There were dwellers on the northern shore of the Black Sea, to whom continual intercourse and frequent intermarriage with their Scythian neighbors gave almost the aspect of nomads; and colonists from Massilia, who in dress and blood were half Gauls. There were people from Cyrene, with the hot blood and dark complexions of Africa, and oriental Ionians, with trailing robes and effeminate airs. There were rude pirates from Acarnania, and delicate sensualists from Cyprus."

To give a detailed account of the competitions at each of the great festivals would involve much unnecessary repetition. That held at Olympia, therefore, may be taken as the type and the ideal of the others. But even at Olympia, the celebrations of which have been most widely written of both by ancient and modern scholars, it is not always easy to determine the exact order of the various contests.

There is hardly a doubt that at the Olympic festival as well as at the others the foot-races were the initial competitions. Plato says that at his time when a contest took place the herald first called on the *σταδιοδρόμος* to do his part. The reason for beginning with the foot-race was probably an historical one; as has been said, it was originally the sole competition at the Olympic celebration. According to the old Eleian priest legends, the Idaian Herakles, one of the Cretan Kouretes, came to Elis in the reign of Kronos, in the golden age, and arranged a foot-race in which the victor was crowned with wild olive. The legends further state that the place thus honored by the priest of Olympian Zeus was afterward called Olympia, and that in time the celebration was repeated at intervals of four years. Of course the foregoing is a tale invented to explain the priority of the foot-race as well as the founding of the festival. Another legend recounts that at one of these subsequent celebrations Endymion, son of Æthlios, offered the kingdom of Klymenos, whom he had conquered, as a prize to that one of his sons who should be first in the foot-race. Such are some of the myths that helped to sanction and endear an inviolable Olympic custom. It is noteworthy in this connection that in the *Odyssey* the Phæaciæns had opened their games with the foot-race.

The technique of foot-racing, the style of running most advantageous, and the training and qualities necessary for it, differ con-

siderably with the distance covered. Accordingly very early in the history of the Olympic festival races of varying length were one by one introduced, and the variety doubtless tended to attract a larger number of competitors and to make the occasion more interesting.

For thirteen Olympiads, however, the race called the *δρόμος* was the only feature. In this race the stadion was traversed but once. As the course of the stadion was about 200 yards, the *δρόμος* was what we call a sprint, and required that a runner exert himself to the utmost from start to finish. This simple race remained a favorite mode of competition among the Greeks until a late time — being practised by Alexander.

The *δίανυλος*, or double course of the stadion, was introduced in the 14th Olympiad. This race required that the runner, after having traversed the 200 yards and reached the goal, should return to the point of starting. As he rounded the goal he described an arc, and on his way back took the opposite side of the track in order that he might not collide with other runners.

Very soon after the introduction of the *δίανυλος* the *ἵππιος δρόμος* and then the *δόλιχος* were instituted. The *ἵππιος δρόμος*, which implies a horse-race, was in reality a foot-race, the contestant running the distance generally covered in a horse-race — namely, four times the length of the stadion, or 800 yards.

The *δόλιχος* was added to the Olympic games in the 15th Olympiad, and was, like our long runs, a test primarily of endurance and lung-power. The distance covered varied from seven to twenty-four laps of the stadion, or from less than a mile to about three miles. At Olympia, however, the distance was twelve stadia. As the *δόλιχος* was run on the same track on which the single and double races took place, it was really only a series of double races.

In the 65th Olympiad, the *όπλίτων δρόμος* was introduced. In this race the competitors wore helmets and greaves, and carried shields on their left arms. Pausanius claims to have seen the statue of Demaratos equipped with a round shield, helmet and antique greaves. At a later period, however, the helmet and greaves were discarded at Olympia, and the race was run with shields alone. The distance covered in this race was two stadia — the length of the *δίανυλος*. Pindar, the poet laureate of the Olympians, mentions the race with shields, and with poetic privilege ascribes its origin to heroic times. Plato considered the exercise very valuable as war training, and prescribed it as a part of the athletics of his ideal commonwealth. Plato devised two other races involving armor: in one

the competitor should be equipped as a heavy-armed hoplite, and should cover a distance of sixty stadia on a level plain; in the other the competitor should wear the light equipments of an archer, and should cover one hundred stadia over hills and valleys.

The running contests at the great games were governed by certain established rules. No fraud or guile was allowed to be used by the contestant on the track for the purpose of impeding his companions. They were very particular that all should start at the same time and from the same line, so that no one might have the advantage over the others. It was also contrary to rule for an athlete voluntarily to slacken his speed and allow his fellow-contestants to win. The competitors were appointed by lot and arranged in groups. These groups raced in heats of four, ranged in the places assigned them by lot. The first group was followed by the second, the second by the third, etc. When all groups had finished, the victors of each again entered the contest and strove for the prize; so that every *σταδιοδρόμος* had to win twice before he was crowned victor.

The physicians of olden times mentioned two other foot-races which in their opinion afforded excellent gymnastic exercise. The first of these was practised in the sixth division of the stadion and consisted of running first forward and then backward. In this race the body was not turned once, but the distance that was run forward was continually shortened by backward running until the contestant finally stood at the starting-point. In the second race the contestant ran on tiptoe with outstretched arms which he swung violently to and fro. It was practised along a wall so that, should the balance be lost, the runner could hold and support himself against it.

Among the less important foot-races were two that had their origin in certain local celebrations, namely, the torch race and the race of the vintage festival, held at Athens. Similar races took place at Sparta during the great national festival of the *Κάρνεια* held in honor of Apollo.

In the preparation for these different kinds of foot-races everything was done in the way of training that would tend to make the body as light as possible and increase its rapidity, although the different cities of Greece varied to some extent as regards the question of diet, rubbing and baths.

In practising for the foot-race the contestant, having divested himself of every shred of clothing and anointed his body with oil,

was made to exert himself as much as possible. The exertion was often increased by making the run in deep sand instead of on firm ground; the foot having a less firm support, the runner was obliged to work harder and more quickly. In this way these exercises gave to the body not only great power of endurance, but also increased speed, and as a result the *δολιχοδρόμοι* possessed strong and well-developed legs. The shoulders and upper part of the body, on the other hand, owing to insufficient exercise were small and narrow. On that account Sokrates did not favor the races because they did not produce a harmonious development of the body. The skilled runner naturally strove to preserve an erect carriage while running, and to conform to all established rules regarding the contest. In this connection it may be interesting to mention the strange ideas entertained among the Greeks regarding the influence of the spleen over the powers of the body. This little organ, situated behind the stomach on the left side of the abdomen, and exercising some function which still remains unknown, would in their opinion if diseased prove a great hindrance to a contestant in the race. In order, therefore, to prevent such a catastrophe they resorted to extraordinary means, namely, the use of certain plants which they believed would dissolve or eat away the spleen; or even to surgical operations, such as cutting or burning it out. On the other hand, they believed that a diseased spleen was greatly benefited by exercise in running. Laomedon of Orchomenos is quoted as furnishing an example of this kind.

The attitude of the runners we learn from vases. Those who were contending in the short race or dash swung their arms backward and forward alternately. This is beautifully shown by a painting on a Panathenæan vase in the possession of Koller. It represents four athletes running, hardly touching the ground with one foot, while the other is raised and moved forward in order to cover the greatest possible distance with one step. The hands are wide open; the arms are moved about freely and appear to act as the wings of the body, and their motion is in harmony with that of the lower limbs. Another vase, discovered in the ancient tombs of Volci, also shows a similar method of running. The athletes are moving rapidly, and using their arms as wings. On the other hand, those who were running a long distance clenched their fists and held their arms close to their sides, as do our modern runners. A peculiar custom prevailed during the games. It is said the contestants kept up a loud shouting in order to retain their courage, while

at the same time the admiring spectators cheered wildly as some favorite or friend neared the goal. As the Greeks did not possess the modern mechanical means of communication, they had to rely mostly upon messengers; hence the great necessity for expert runners. To this fact is due to a considerable degree the development of agonistic and running contests in Greece. It is said that after the battle of Plataea all the sacred fires which had been profaned by the Persians were extinguished, and that *Ἐνχίδας*, a Plataean, covered in one day the distance of a thousand stadia from Plataea to Delphi and back again, and brought his fellow-citizens the pure fire from the altar of Apollo. As a result of this terrible strain he sank to the ground and died. The Cretans were especially noted in the *δόλιχος*. Sotades and Ergoteles were among the most famous. The Arcadian Dromeos was another celebrated runner, having been like the former twelve times victorious in the *δόλιχος*. Ladass, the famous Spartan runner, was also victorious in the *δόλιχος*, but according to Pausanias died at the goal on completing a race.

Comparison of the speed of Hellenic athletes with that of modern runners is exceedingly difficult, because the Hellenes had no means of measuring minutes of time; they did not say of an athlete that he ran the *δίαυλος* in such a time, but that he won (*i. e.*, surpassed his competitors) in a certain Olympic celebration.

Probably the next event was the pentathlon. This competition was introduced into the festival at about the 18th Olympiad. As the etymology of the word signifies, the pentathlon consisted of five distinct competitions, enumerated in a well-known pentameter ascribed to Simonides: leaping (*ἄλμα*), running (*ποδωκείην*), diskos-throwing (*δίσκον*), spear-throwing (*ἄκοντα*), wrestling (*πάλην*). That the poet arranged the events in this order cannot be taken as positive proof that this was the real order, as it is hard to see how these words could be arranged otherwise in a pentameter. It is probable, however, that wrestling was the final contest. There is some uncertainty as to what constituted a victory in the pentathlon, but it is evident that the purpose of this competition was to develop what we call "all-round athletes," and the assertion that the victor must have won three out of the five contests cannot be far from the truth.

In such a combination of exercises it would certainly be good athletic policy to make leaping the first contest. It may be questioned whether an athlete could leap so well after having engaged in the more violent exercises, whereas leaping itself, instead of dis-

qualifying for the other exercises, would on the contrary rouse the animal spirits without bringing on exhaustion, and thereby put the athletes at once in good condition. For the leap requires not only vigor and elasticity, but also courage and determination.

The beneficent results of this exercise were recognized at a very early period by the Hellenes, although in the heroic world the leap was not considered so important as the other modes of contest. In the games of Achilles the leap is not mentioned. In the *Odyssey*, however, the Phæacians, a light-hearted people, more fond of amusement than of war, are said to be skilled in leaping. It is in historic times, however, that leaping, as an important event in the pentathlon of the public games, acquires its technique, and receives the careful attention of athletes.

What may be called the pure leap, that is the standing leap without accessory aids, was not practised at Olympia. The leaper held in his hands weights resembling our dumb-bells, and known as *άλτηρες*. To determine the dynamic advantage of these weights is not easy, but it is certain that with them the exercise required more skill, and accordingly more practice, that it called into play more muscles, and that it was more attractive to athletes as a mode of competition.

While little information can be obtained from classic writers concerning the *άλτηρες*, much can be learned from archæological specimens. Pausanias describes them as having the form of a semi-oval, or inaccurately-rounded ring that could be grasped by the fingers as a shield was grasped. This description corresponds with a drawing of the *άλτηρες* on a vase in Hamilton's second collection. *Άλτηρες* of another shape, however, resembling very closely the modern dumb-bells, are seen on many other vases and gems. These had both ends rounded, and were narrow in the middle in order that they might be easily held. In Hamilton's first collection are vases giving representations of these *άλτηρες*. In the Museo Borbonico may be seen on a patera a drawing in which the *άλτηρες* have still another form: when the hand has grasped the handle of these, beyond the hand, on one side only, a club-shaped part protrudes. The *άλτηρες* were usually made of lead.

In the pentathla, leaping never took place without *άλτηρες*, which the athlete usually held directly in front of him, and then, as he sprang, brought behind him, thus helping to propel his body forward.

In addition to the *άλτηρες*, professional athletes made use of

another aid — the *βατήρ*. The latter was a board on which they stood before taking the leap, and which may indeed have been provided with a spring.

Pausanius especially mentions the fact that the leaping of the pentathli in the Olympic festival was accompanied by airs on the flute. This music was probably to open the pentathlon, the most splendid and stirring of gymnastic contests, as well as to increase the courage of the leapers.

The only leap that belonged to the pentathlon was the standing long jump. There is no trace of anything like the hop, step and jump. The figures of athletes on vases are represented not as running, but as standing and swinging the *άλτῆρες*. Then, too, it would seem that in the running jump the weights would be an impediment rather than an aid. With the aid of the *άλτῆρες* and the *βατήρ* enormous distances were covered. Phaÿllos of Rhegium is said to have covered more than fifty-five feet at a leap. But the record is incredible. Some German professors, however, are inclined to credit the record on the ground that the ancients had studied the theory of leaping more scientifically than have the moderns. For the sake of comparison the modern records in jumping may be introduced. On May 28, 1890, J. Darby of England, without the aid of weights, made a standing long jump of 12 1-2 feet. At Romeo, Mich., October 3, 1879, with 22-pound weights, G. W. Hamilton made a standing jump of 14 feet, 5 1-2 inches. A record of 23 feet, 6 1-2 inches, in the running long jump has been made twice: by C. L. Reber at Detroit, July 4, 1891, and by C. B. Frye of England, March 4, 1893. A jump of 48 feet, 8 inches, without weights and preceded by a hop and a step, was made October 18, 1884, by T. Burrows of Worcester.

In the *palaestra* and the gymnasium, leaping was practised in many different ways, as through a hoop, or over a rope. That the high jump also was practised is evident from the fact that the athletes leaped not only over pointed poles fixed in the ground, but also over one another's heads, after the manner of modern circus performers. Leaping from a higher place to a lower was also practised. Leaping took place in dancing and in various other sports. A dance, consisting principally of leaping was practised at Sparta, particularly by young women and girls. In this the dancers aimed to hit their backs with their heels. Aristophanes alludes to this custom in the following dialogue between Lysistrata and Lampito:

LYSISTRATA:

Hail! Lampito, dearest of Lakonian women.
 How shines thy beauty. O, my sweetest friend!
 How fair thy colour, full of life thy frame!
 Why, thou couldst choke a bull.

LAMPITO.

Yes, by the twain;
 For I do practise the gymnastic art.
 And, leaping, strike my backbone with my heels.

LYSISTRATA.

In sooth, thy bust is lovely to behold.

It is probable that in the Olympic pentathlon leaping was followed by diskos-hurling,—a contest of great antiquity. An old myth represents Apollo as a diskos-thrower.

The diskos was circular in form with perhaps an average diameter of a little less than a foot, and was made of various materials at different periods and places. The heroic diskos, as has been said, was made of stone, while that of a later period was of metal, and even of wood. The diskos in common use at the Olympic festival was metallic, and resembled a small shield.

In the local gymnasia the size and weight of the diskos varied in order that an athlete might select one in accord with his strength. But in the men's pentathlon at the public games a standard diskos was required,—uniform in material, form, and weight, in order that the strength and skill of the competitors might be impartially tested and the victory correspondingly awarded. There is considerable doubt as to the dimensions and weight of this standard diskos. It is likely that the weight was between four and five pounds. A specimen found at Ægina and now preserved among the bronzes at Munich is about eight inches in diameter and slightly less than four pounds in weight. But another specimen at present in the British Museum weighs twelve pounds.

There is also doubt as to the distance to which a skilful athlete could hurl the diskos. An extravagant record of one hundred cubits is preserved in the writings of Philostratos. It is probable, however, that one hundred feet was an extraordinary throw and was exceeded only by the best athletes. While it is unlikely that the throws of renowned athletes were carelessly measured at the time, it is probable that many subsequent accounts were more or less exaggerated. It is well to bear in mind that the statue of

Phayllos was greatly admired among the Greeks because that athlete had thrown the diskos ninety-five feet.

It is interesting in this connection to note that at the International Athletic Games, celebrated at Athens in 1896, the victor in the diskos-throwing competition made a record of 95.64 feet. The diskos used in this competition weighed 4 3-4 pounds. Although three skilful Greek athletes participated in this competition and exhibited a technique much superior to that of the foreign competitors, yet the victory was won by Mr. Garret, an American, who though never having handled the diskos before threw it to the above distance, thereby surpassing the best throw of M. Paraskevopoulos, the Greek champion, by .64 feet.

To return to the ancient contests, the Homeric heroes practised diskos-throwing without completely disrobing,—the upper garment only being laid aside. But at Olympia after the 15th Olympiad all clothing was dispensed with, and the advantage of entire nudity in this sport came to be clearly recognized. Nudity characterized, of course, the diskoboloi of the other great athletic festivals. Again, while the Homeric heroes did not anoint the body with oil, the athlete of historic times did not consider his preparation complete without it.

After roughening his hands and the diskos with earth, in order to grasp it more firmly and handle it more deftly, the diskobolos ascended an eminence, called the *βαλβίς*. When about to throw, the body of the diskobolos was bent quite a little to the right and forward. At the same time the head was bent to the right so far that it was possible for him to see the upper left side of his body. The right arm was now moved from below, first backward to the height of the shoulders, and then with a rapid movement forward it described a semi-circle, giving the diskos at once velocity and direction. In throwing the diskos, the diskobolos rested first on the right foot and then on the left. At the moment of hurling the diskos the left knee was slightly bent, while the other was kept backward. As the diskos left his hand he took one or more steps forward, like a person throwing a ball in a bowling alley.

Again we are indebted to the archæologist who has brought to the light of day not only statues but also vases and gems with their elaborate scenes of the diskobolos in various attitudes, for they reveal to us many facts about which the ancient historians are silent.

In classifying these works of art three different attitudes may be recognized :

- (1) The diskobolos preparing to throw.
- (2) The diskobolos in the act of throwing.
- (3) The diskobolos having hurled the diskos and still following it with his eyes, or where he has already been declared victor.

In the Museo Pio Clementino is a statue representing an athlete about to hurl the diskos. In his left hand he is testing the weight of the diskos, but holding the right ready to receive it and hurl it into space. This statue was supposed by Visconti to be a copy of a diskobolos by Naukydes, the pupil of Polykleitos. Many other copies are also seen on vases and gems. On one of Hamilton's vases the diskobolos holds the diskos in his right hand, supporting its weight in his left.

Of the statues representing the athlete in the act of throwing, we will consider only Myron's Diskobolos, the beau ideal of athletic motion, famous even in antiquity. Eight copies in a more or less mutilated condition have come down to us. That which was found in the Villa Palombara in 1781 on the Esquiline is the best reproduction of the original. This statue passed from the palace known as that of the *Massimi alle Colonne* to the *Lancelotti Palace*, Rome, where it still remains. The attitude of the diskobolos is very nearly that described by Lucian and Quintilian. In the *Philopseudes* — 1, 8, Lucian gives the following description of Myron's Diskobolos: "Thou speakest of the disk-thrower, who is bending forward for the throw, with his face turned away towards the hand that holds the disk, and with one foot slightly pointed, as if he would raise himself with the action of throwing."

The statue reveals probably the most approved attitude of a diskobolos just before making a throw. The centre of gravity falls upon the right foot, which, though the leg is bent in a slight curve, rests firmly on the ground; both legs are bent at the knees, but the left more acutely; the right fore-leg is perpendicular, while the left is thrust backward obliquely; the left foot, forming a noticeable curve, is upright and touches the ground only at the tips of the toes; the thighs, close together, slant upward, making an angle of over 45° with the ground; the upper part of the body is bent forward, and is steadied by the left arm whose hand rests against the right knee; the upper half of the body is twisted to the right; the right arm is extended backwards and is straight; the fingers of the right hand, which is somewhat above the level of the right shoulder, firmly grip the edge of the diskos; the head is turned so far to the right that the right side of the body is plainly visible; the eyes are fastened on the diskos.

It is evident that the diskobolos must have swung the disk in a semi-circle, and have hurled it from below forward, and that the whole body must have relaxed and readjusted itself as the right arm moved forward and imparted the pent-up energy to the disk.

The pose of the large cast in the Boston Athenæum, as well as that of the cast in the Boston Museum of Fine Arts, is not in accordance with Lucian's description. Both represent the head as not turned aside but directly forward, with the eyes looking straight ahead. There is, however, in the Fourth Greek Room, a cast of a small bronze statuette, which is preserved in the Antiquarium at Munich. This is in many respects an excellent copy of Myron's diskobolos. In the catalogue of the casts in the Museum, this statuette is pronounced especially satisfactory from an æsthetic point of view because the line of equilibrium falls perpendicularly through the centre from whatever point of view the statuette is seen.

Besides this copy of Myron's statue, we find on many vases and gems the diskobolos in the act of hurling the diskos. For instance, on one of Hamilton's vases we see a diskobolos with a diskos in his right hand, while the right arm is bent and held forward, showing that he is on the point of moving the arm backward, and then forcibly hurling the diskos from below, forward. The left arm is bent over the head, the eyes are fixed on the diskos, the right foot is placed forward, so that the centre of gravity falls on the left, which is obliquely bent at the knee.

We will now consider the third class of statues, gems and vase-paintings representing the diskobolos as having thrown the diskos, and still following it with his eye, or where he has already been declared victor and adorned with the palm. In 1754 there was discovered at Herculaneum the bronze statue of a diskobolos from whose hand the diskos has just flown. He is still standing, however, with the upper portion of his body bent forward, the eyes looking sharply into space, the face full of expectation. The position of the right arm indicates that the hand is only just freed from the heavy diskos. Both feet are placed wide apart, as may be observed in several other instances, at the moment of throwing. In the *Galerie de Florence* is a gem which represents a diskobolos who has been declared victor. He holds the diskos in his left hand, the palm of victory in his right. At his right stands a prize cup, while at his left is a tripod upon which is a wreath and a palm. A painting from Herculaneum also represents a diskobolos after having thrown the diskos.

If space permitted, many other statues, vase and gem pictures could be cited to show the different positions of the skilled diskobolos. But enough has been said to show that to hurl the diskos through the air at once gracefully and effectively required the greatest skill and dexterity, and was an art acquired only through long practice. In diskos-throwing, distance, not height, determined the victor. He who threw the farthest beyond the mark or $\sigma\eta\mu\alpha$ was awarded the prize.

Diskos-throwing was a good preparation for war, as it developed great skill in stone-throwing — a very important feature in the war practices of the ancients. This exercise must have developed to a remarkable degree the muscles of the upper part of the body, shoulders, arms and hands — especially those of the right side of the body. At the same time the feet were trained in a firm and secure step, and, although the diskos was thrown at no fixed point, the eye was nevertheless used and trained. So beneficial was the exercise in certain cases that it was often ordered by the ancient physicians. Among the Spartans the diskos was especially loved, ostensibly on account of Apollo's contest with Hyakinthos on Spartan soil.

(TO BE CONTINUED.)

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III. THE OLYMPIC GAMES IN ANCIENT TIMES.

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THE third event of the pentathlon was spear-throwing. In the athletic training of an Hellenic youth, spear-throwing came after the hand and arm had been strengthened by ball-playing and diskos-throwing.

Spear-throwing, as has been shown, growing out of the very early necessity of war-training, was a primitive mode of exercise. The spear (*δόρυ, λόγχη*) used by the Homeric heroes was very large, and as heavy as they could handle effectively. None but that warrior himself could wield the spear of Achilles. Hector's spear was 16 feet long; the shaft was made of ash. A socket was fitted to the upper end of the spear, in which was inserted a bronze spear point. But that used at the pentathlon, and denoted by the term *ἄκων*, was smaller and lighter.

The attitude of the body, the movement of the arms and shoulders, and the carriage of the head were very different in spear-throwing from those in diskos-hurling. The athlete stood erect, and raised his right arm upward and slightly backward; his right foot was generally placed backward, while his left was advanced; his eye was fixed on a goal straight ahead. He grasped the spear in the middle and held it in a horizontal position on a level with his right ear; sometimes he moved it backward and forward be-

fore throwing, but as often omitted such preliminary exercise. Sometimes it was thrown by means of a strap attached to it, as is still the custom in many countries.

In the pentathlon, spear-throwing was a test rather of skill than of strength; an athlete who could win the victory with the diskos might suffer defeat with the spear, although diskos-throwing required more strength than spear-throwing. Spear-throwing trained the eye and made the arm deft in executing the eye's direction.

It conferred upon the body other peculiar benefits; the organs of respiration were stimulated; the chest was strengthened and enlarged; the right arm was strengthened; in order to throw the spear effectively the athlete must maintain a graceful poise and have command of his entire body; to do so with a weight held aloft, strengthened the lower limbs, made their muscles more facile, and the step more sure.

By inserting this particular exercise into the pentathlon the early Olympians not only recognized the foregoing advantages, but they also honored the characteristic exercise of their ancestors, and subsequent Olympians followed their example. For the spear was the traditional sign of the freeman; as far back as myth and memory could go, it had been carried, even in peace, as an honorable and distinguishing token.

Plato, in his scheme of the ideal state, prescribed spear-throwing as a training for war, and directed that it should be practiced by women as well as by men.

At Rome, during the time of the emperors, spear-throwing was included among the gymnastic exercises of that city. Instruction in this art was received from the Mauritians. But it is said that the Emperor Commodus surpassed even the skill of his instructors; in the amphitheatre he killed, according to the story, a hundred lions with as many spears; at another time he astonished the spectators by the dexterity with which he hurled his spear at the Mauritanian ostriches, as they ran by the amphitheatre at full speed; with every throw he severed a bird's head from its body.

We have no accounts to show as to how far a Greek athlete could hurl a spear, but we know that savages of today can hurl it to a great distance. It is said by travellers that a Kaffir who suddenly comes upon game will hit an antelope ten or fifteen yards away without raising his arm.

The three events that have been described, leaping, diskos-throwing and spear-throwing, were probably the essential features of the pentathlon; that is to say, an athlete who won in all three events was probably crowned victor. If, however, the victories in the three events were not secured by the same man, the competition was decided by additional contests in running and wrestling. But as at other stages of the festival these two exercises were distinct events, a description of their technique may be omitted in this place. Among those who distinguished themselves in the pentathlon, were included some of the most illustrious men of Greece.

The pentathlon was succeeded by horse and chariot races.

Chariot racing, even as far back as the heroic time, had attained a high rank in the domain of antagonistics; it was, indeed, the first contest in the funeral games of Patroklos. (Il. xxiii. 262-650.) In the minute and vivid description of Homer, the nature of the contest and the arrangements are very clearly indicated. There was no artificially constructed hippodrome. A flat, open plain, with its natural irregularities and without buildings of any sort, served as the race-course. The point of starting was on the sea-coast, but the turning point was in the plain of Troy. The goal, which was the stump of a tree, could be seen in the far distance only by its having two white stones leaning against it on either side. On account of the great distance, the spectators were not able to distinguish between the approaching horses. (Il. 450 ff.) Hence rose an altercation between Idomeneus and Aias, as to whose chariot was leading in the race. Achilles advised both to wait quietly until the horses were nearer and the order of the chariots could be recognized by all.

With a very few points of difference, this description of Homer gives a good idea of a chariot race at Olympia. The difference consisted, first, in running the length of the course several times instead of once, in order that a body of spectators might witness the entire race; second, in the greater number of chariots, and third, in the arrangements, whereby they might start without confusion. In the games of Achilles, the chariots were five in number, each with two horses and a single driver, who stood upright in the chariot. As we have already mentioned, the Homeric hero made use of two horses in the race as well as in hostile combat, while the Olympic contestant did not limit him-

self to two horses. In fact, the four-horse chariot-race, which was introduced in the twenty-fifth Olympiad, was the first in honor and in importance, and always remained the most popular. In this contest, only kings, nobles, and the wealthy could take part, on account of the great expense involved in rearing fine horses, and in maintaining costly chariots. Very often, the victor had his triumphs recorded on the state issues of coins.

Races on horseback date from the thirty-third Olympiad. Philip of Macedon won in this contest, and celebrated his victory by having an enormous horse, ridden by a diminutive jockey, placed on his coinage. As this victory took place in the same year in which Potidaea fell into his hands and his son Alexander was born, he regarded that year as especially auspicious.

While the race of the quadrigæ of horses was introduced as early as the twenty-fifth Olympiad, that of the bigæ of horses was not introduced until the ninety-third Olympiad. A quadriga consisted of four horses harnessed to a chariot; a biga, of two horses. In the seventieth Olympiad, bigæ of mules were admitted, but in the eighty-fourth Olympiad they were excluded; their exclusion may be ascribed to two reasons: first, they presented an unpleasing appearance; second, among the Eleians, according to Pausanias, a curse had rested on the animals from ancient times.

Prior to the twenty-fifth Olympiad, all athletic contests had taken place in the Stadion. As chariot-racing, however, demanded more room, a separate race-course, called the Hippodrome, was established. The site of the Hippodrome cannot be exactly traced. This is because the Alpheios has washed away all certain indications of its limits. But from the account of Pausanias (V, 4; VI, 20, 7 foll.) it may be approximately located: it lay to the south of the Stadion and extended roughly parallel with it, though stretching far beyond it to the east. The German explorers who excavated Olympia inferred from the state of the ground that the Hippodrome was about 2526 feet in length. The Stadion and Hippodrome were closely connected, the rear part of the aphesis, or starting point, of the Hippodrome adjoining the end of the Stadion. At the farther end of the Hippodrom was the goal outside of which the chariots had to turn. To round this goal with advantage, that is, to keep as close to it as it was possible to do without upsetting his own chariot or colliding with another, required long practice and great dexterity on the

part of the driver; it was indeed a very dangerous feat; at every race a large number of the chariots involved were wrecked, and in such accidents the charioteers rarely escaped without serious injuries. According to legend, Orestes had met his death at a Pythian festival; his chariot colliding with the goal, he fell to the ground, became entangled in the reins, and was dragged or trampled to death. After every turning of the goal, the chariots were greeted with the sound of trumpets in order that men and horses might attain new courage and vigor after so dangerous an ordeal.

The signal for the chariots to come out from the rooms allotted to them in the aphasis and form in line for the race was given by an eagle which, by means of mechanism, rose into the air at the same moment that a dolphin fell to the ground. Such a signal was characteristic of the Greek; but in the Roman races, the chariots started at the waving of a white cloth by a person of distinction.

The equestrian contests at Olympia were succeeded by boxing. Boxing for men was introduced at the Olympic festival in the twenty-third Olympiad, and for boys in the thirty-seventh Olympiad. But the sport was already very old, and its introduction at Olympia was probably a recognition of its popularity and antiquity. In fact, as the fist is the simplest and most natural weapon of mankind, it is not surprising to find that boxing was one of the earliest athletic games among the Hellenes. Homer's detailed description of the contest of the invincible Epeios with Euryalos has already been mentioned, and Homer had probably heard many similar tales of the prowess of Mycenean boxers. Polydeukes, the bravest boxer among the pre-Homeric heroes, is said to have defeated the strong Amykos. The latter was a teacher of the art, and allowed no stranger to depart from his country without challenging him to a pugilistic contest. Apollo himself, the gracious companion and leader of the Pierides, is described as engaging in a boxing contest at Olympus with Ares, the powerful god of war; perhaps in this myth there is a suggestion of the advantage which the nimble and quick-witted boxer sometimes has over a more bulky one. In the mythical founding of the Nemean games, Tydeus was victorious in a boxing contest. In the passage of Virgil's *Æneid* (Book V, 401 ff.), which so closely resembles the twenty-third Book of the *Iliad*, the aged

Entellus vanquishes the young and boastful Dares. This contest showed a complete system of striking and parrying.

It is quite likely that these and many other similar legends augmented the natural interest in the sport, and hastened its introduction into the greatest of all athletic festivals. But at Olympia the sport was marked with variations. Whereas, for instance, the Homeric heroes, when boxing, had protected their bodies by means of a girdle around the loins (Il. XXIII, 683), the Olympian athletes, being already accustomed to nudity in the wrestling and racing contests, dispensed with such protection. Again, from the first, Olympian boxers oiled the body, contrary to the practice of Homeric athletes.

Probably very few of the tactics of modern pugilists were unknown to the Greek athletes. Some of the accessories of a modern ring-fight, such as the "preliminary hand-shake," tossing for corners, etc., were of course wanting; particularly noticeable was the absence of ropes and stakes; there was no referee to enforce so strict a code of ethics as the Marquis of Queensberry rules, fair play being secured by the voice of the people. Grasping or hugging the opponent was not permitted; it was in the elimination of such tactics that boxing differed from the pankration, a combination of boxing and wrestling. Kicking was likewise forbidden.

The set-to of Greek boxers probably resembled very closely that of modern pugilists. The ancient descriptions of the manner of giving and guarding or blocking blows are rather vague; but on antique vases may be seen representations of boxers facing one another in well-balanced attitudes, their heads thrown back, and their arms well advanced, in the manner of the best modern pugilism. In a famous Greek painting of boxers, one of the men stands with his left foot and hand advanced, his left arm slightly bent, and his right arm held across his lower chest, in fact, just as Fitzsimmons or Corbett would stand when expecting a blow. In the beginning of the contest, the boxer was sparing of his strength and preferred to assume the defensive position, and so wear out his opponent. It was, of course, considered a merit for a boxer to conquer without receiving wounds.

The principal differences between the technique of Olympian boxing and that of modern pugilism must be ascribed to the use at Olympia of that cruel boxing weapon known as the *cæstus*.

This consisted of a heavy thong of dry, hardened leather, wound about the palm of the hand so as to form a formidable ridge of considerable circumference; it was even rendered more formidable by being loaded with lead, and studded with little metal projections. This nail-studded covering was called *σφαῖρα*, and was unknown to the ancient Greeks. That it was very dangerous is shown by the fact that when used in the practice gymnasias, it was itself covered, in order that young athletes might become accustomed to its use before subjecting themselves to its deadliness. But even more brutal than these were the *μύρμηκες*, called the breakers or crushers of limbs. One cannot conceive of a more formidable covering for the hand, unless it be the terrible *cæstus* of the Romans, to which Virgil alludes in the memorial games of Anchises (*Æn.* V, 401): "*Tantum ingentia septem Terga bouum plumbo insuto ferroque rigeabant.*" "So terrible was the seven-fold bullhide stiffened with patches of lead and iron." An examination of the representations of hands armed with this covering makes it evident that the straight blow or counter would not only fail to make the weapon effective, but would, if forcible enough, crush the fingers of the boxer between the leather and the adversary's body. The *cæstus* must, therefore, have been used for round blows, or for the old English blow called the "chopper"; these were delivered by the back of the hand in an outward and downward swing, and, to be given without injury to the one who dealt them, required considerable skill.

The blows were directed at the upper parts of the body, and the wounds inflicted on the head, the temples, ears, cheeks and nose, were very severe and frequently proved fatal. The teeth were often broken or injured. It is related of Eurydamas, the Cyrenean, that his teeth were knocked out by his adversary, but that he quietly swallowed them in order to conceal from him how much he was injured; his adversary, disheartened by the apparently small effect of his powerful blow, lost hope and allowed Eurydamas to win the victory. The ears, especially, were exposed to great danger, and those of regular pugilists were usually so mutilated and swollen that the phrase "fighter's ear" became a stereotyped expression. Little covers for the ear, known as *αὐφώτιδες*, were invented for gymnasium work, but they were not used in public games. Boxers, on account of the bruises and disfigurements that usually marked their features, were the sub-

jects of numerous epigrammatic jests. Here is a sample from the pen of a comic poet:

"After twenty years," says the author of the epigram, "Ulysses was recognized from his appearance returning to his home, by his dog, Argos. But thou, Stratophon, after boxing for four hours, hast been so altered, that neither dogs nor any person in the town could possibly recognize thee. And if thou lookest at thy face in a mirror, thou thyself wilt swear that thou art not Stratophon."

Of the boxer Olympikos, a poet says that he once had a nose, a beard, eyebrows, ears and eyelids, but that when he had inscribed his name among the pugilists he lost them all.

The only protection against the wound-dealing *cæstus*, aside from skill in blocking blows, was a cap of bronze that was worn by boxers at Olympia.

Another noteworthy point of difference between Olympian and modern boxing is that instead of maintaining silence during the contest, as do the moderns, the Olympians accompanied their blows with certain inarticulate sounds, believing that their force was thereby increased. Modern stone-masons frequently do the same.

The contest at Olympia did not end until one of the combatants was rendered unconscious, or was compelled by fatigue, wounds or despair to declare himself conquered, which he signified by lifting his right hand.

In this connection it is interesting to trace the evolution of boxing in Greece. At first, of course, the bare fist was used; but as time went on, boxers learned to cover their fists and wrists with strips of undressed ox-hide, the *ἰμάντας ἐϋτμήτους βοὸς ἀγραύλοιο* in the contest of Epeios and Euryalos (Il. XXIII, 684). Homer mentions these *ἰμάντες* as if they were very common. The name *μειλίχαι* was given them by later writers, because they dealt a mild blow; they are described by Pausanias (VIII, 40, 3) as made of raw ox-hide, cut into thin strips and braided according to the custom of the ancients. The strips were wound round the palm, leaving the fingers uncovered, at least enough so that they could be bent to form a clenched fist. As the name indicates, the *μειλίχαι* were not cruel weapons; they served not only to moderate the force of the blow, but also to protect the hand from injury. They were used at the Nemean games as

late as the famous contest between Kreugas and Damoxenos. It is likely that with these soft coverings the technique of blows conformed more nearly with the modern technique. It has been already shown that the straight counter was rendered impracticable by the *cæstus*. But without the *cæstus* the Greek was very skillful with this blow. The Greek also understood the advantage of the cross-counter, a blow sometimes thought to be a comparatively recent discovery in pugilism. If the Homeric description of the bare-handed fight between Odysseus and the impudent ruffian and parasite, Iros, be analyzed, the blow will be found plainly involved. Iros, who is of gigantic size, has insulted Odysseus. A ring is formed and they begin to fight (*Od. XVIII*, 73-231).

“On his right shoulder Iros laid his stroke,
Odysseus struck him just beneath the ear,
His jaw-bone broke, and made the blood appear,
When straight he strewed the dust.”

The blow of Odysseus must have been a cross-counter. Iros leads with his left at Odysseus' head, but the blow falls instead on his right shoulder. Odysseus avoids the blow just as a trained boxer would avoid a similar one today; that is to say, he moves his head to the left, and catches the blow on his right shoulder, at the same moment, “rising to the stroke.” He then crosses Iros' arm with his right, strikes him beneath the ear, and breaks his jaw, thereby “knocking him out.”

The introduction and use of the *cæstus*, brought about by the blood-thirstiness of the ancient mob, instead of being in the interest of further skill was decidedly a backward step. For not only did it improperly limit the technique of blows, as has been shown, but it was too sure a menace to the very source of human skill, the senses and consciousness itself.

Solon praised boxing from an educational point of view. Cato the elder must have entertained a high opinion of this art, for, according to Plutarch, he himself instructed his son, with whose education he took the greatest pains, in the art of boxing.

In justification of this praise, it must be remembered that Greek boxing, aside from its brutal features, had also its æsthetic side. A graceful carriage, dexterity, and promptness of activity were cultivated. We find Apollo, the embodiment of youthful

grace and beauty, and the ideal of Hellenic æstheticism, represented as a boxer. Even from the medical point of view, boxing was highly esteemed. Aretaïos recommends it for vertigo and chronic headache (*De Morb. Dint. Cur.* 1, 2).

This sport engaged young men of the noblest families in all parts of Hellas. Pythagoras is said to have been victorious when a youth in a boxing contest at Olympia. Rhodes, Ægina, Arkadia and Elis were noted for producing skilled pugilists.

Boxing was followed by wrestling and the pankration which were the final competitions. As is well known, wrestling was one of the most popular sports among the Greeks, from the days of Homer. According to mythology, Palaistra, the daughter of Hermes, established the *πάλη*, while her brother, Autolykos, is mentioned as the instructor of the young Herakles in this art. Plato also assigns the origin of wrestling to the earliest times and declares Antaios and Kerkyon to be the most ancient wrestlers. But the mode of wrestling was the result of a mere desire to fight, and so did not develop wrestling as an art. Theseus is said to have been the first to reduce it to a system and to practice it according to definite rules. We have already mentioned how Homer, in the games of Achilles, causes the powerful Telamonian Aias and Odysseus to engage in a wrestling bout. Wrestling matches were among the chief events in the famous games at Olympia and elsewhere. They were introduced earlier than boxing and were believed to show off the strength, activity and grace of the body to more advantage than any other contest. No other exercise required such perfect development of every muscle in the body, or an equal combination of strength and agility.

Plutarch calls wrestling the most artistic and cunning of athletic sports. It was as full of tricks and feints as that of modern times. The opponent was often deceived by feigned positions and movements. Sometimes the wrestler would feint as if to grasp his adversary in a certain place, but by a quick, cat-like movement would attack him in another which had been left exposed. Cunning was likewise practiced by the Homeric heroes. Odysseus overpowered Aias by striking him in the hollow of the knee. But while wrestling was characterized by tricks, the observance of certain rules was insisted on at Olympia. Striking, kicking, and pushing were prohibited, but, strange to say, disjointing an opponent's fingers was allowed, probably on the ground that it involved grasping.

While the Greeks in their athletic sports sought for grace and symmetry as well as strength, it is nevertheless true that their wrestlers were noted for their bulk. Corpulency was considered advantageous for a wrestler for two reasons: first, the increased weight rendered it less easy for an opponent to lift him off the ground; second, it was easier for him, on the other hand, to overpower his adversary at the opportune moment. Nevertheless, a graceful style of wrestling, while less easy to attain under this condition, was much sought after. And oftentimes grace is the concomitant of a skill that possesses a sure advantage over mere bulk. Very joyous were the Olympic spectators when this fact was demonstrated. When the boy Kratinos of Aigeira was victorious in a match in which skill was more apparent than mere strength, the authorities permitted him to have placed in the Altis not only his own statue, but that of his teacher. Pausanias says that Kratinos exhibited a more graceful style than any other wrestler of his time.

Two modes of wrestling were in vogue at Olympia, standing and ground wrestling; the former, called the *τριάγμός*, was most common. The contestants stood upright, face to face, and after one had been thrown and had risen, the contest was renewed. This was the style practiced by the Homeric heroes. After Aias and Odysseus had thrown each other to the ground, they rose and continued the struggle. Victory was bought with three throws. Standing wrestling was practiced in later times at all the great games. Plato, especially, prefers this style, as it develops the upper parts of the body, the arms, shoulders, chest and neck. In the latter, or ground wrestling, when the combatants had fallen they continued the struggle on the ground, until one acknowledged himself conquered. This kind of wrestling belonged especially to the pankration, and like that cruel contest was unknown in heroic times. Solon, according to Lucian, claims that this mode is of great value as a preparation for war. Plato, however, does not so regard it. Dion Cassius, in his description of a battle between the Romans and the Jazyges on the ice of the Danube, claimed that in this particular instance, familiarity with ground wrestling was especially advantageous.

Of the numerous tricks, feints and holds practiced by the Greeks, the following were the most noteworthy. The antagonist endeavored to throw his opponent either by tripping him, or by

grasping his foot with his hand. This latter style is differently illustrated on two vases. On the first vase the antagonist is represented as grasping with his right hand his opponent's foot, which he has raised to a line with the middle of his body, while with the left arm he is further raising the thigh, thus forcing his opponent to the ground. On the second vase, the contestant has raised his opponent's foot and is holding it up with the left hand, which is placed under the knee; both contestants are moving the right arm as if preparing to strike. This probably represents the pankration, as striking was not allowed in the wrestling bout. A similar illustration is seen on a coin; but here the antagonist, whose foot is held by his opponent, holds the latter in his arms in order to drag him down if he should fall.

Another trick, in which the athlete wound his leg around his opponent's thigh, was often practiced. This point is beautifully illustrated by the famous group of wrestlers in the Uffizi Gallery, Florence, of which a fine cast may be seen in the Boston Museum of Fine Arts. Winckelmann considers these wrestlers to be the sons of Niobe, as they were found in 1583 at the same time and place as the Niobe group. According to the legend, they were engaged in a wrestling match when slain by Apollo's arrows.

The technical names of the various locks and holds which have come down to us do not give a clear and definite idea of wrestling. If one of the Hellenic gymnastes, who must have written accounts of the different modes of wrestling, had left behind a complete list of movements, or if the most important parts of the literature bearing upon gymnastics and agonistics had been preserved, we might form a more definite conception of the wrestling match. To the student of athletics it may be interesting to mention a few expressions which have come down to us from this ancient nomenclature. The word *δράσσειν* which literally means to seize or grasp the hand, was probably applied to the alternate grasping of the arms. This movement is beautifully illustrated on many antique works of Greek art, especially on vases, gems and coins. It was one of the chief manœuvres of the wrestlers and might have occurred at the beginning of the contest. Plutarch designates the different modes of attack, position and manœuvres of the wrestlers by the terms *ἐμβολαί, παρεμβολαί, συστάσεις, παραθέσεις*, from which general conceptions may be formed, but hardly clear imagery. The following Greek words, *ώθιομοί, πε-*

ριπλοκαί, λυγισμοί, which literally mean pushing, grasping and twisting the limbs, were used by Lucian to express different styles of wrestling. The terms *συναφή* and *κατοχή* used by Hesychios when speaking of athletics, can apply only to the wrestling match itself. The movement whereby the antagonist is forced from his position is described by the term *ἀπάγειν*, literally to lead away or carry off. *Ἀγχειν* and *ἀποπνίγειν* describe the grasping of the neck and choking, in order to prevent respiration. This trick of grasping the opponent's neck and then throttling him until he acknowledged himself conquered was considered a very cunning act. Sometimes the wrestler would obstruct respiration by forcing his elbow under the chin of his adversary, or he would attempt to bring the neck of the latter between his thighs and then exert such pressure as almost to strangle him. This occurred more frequently in the ground wrestling. On a gem is portrayed a group of boy wrestlers, one of whom, while resting on his right knee, is firmly holding by the throat his opponent, who is on both knees; to the right stands a prize vase with a palm, to the left, an umpire with a rod.

The *ἄμμα* involved grasping the opponent in such a manner that he could be held in a position that would tire him and perhaps exhaust his energy. Herakles in his wrestling contest with the mighty giant, Antaios, was believed to have used this trick; but Herakles held his antagonist in the air. Running toward each other with lowered heads for the purpose of butting, after the manner of rams, also belonged to the province of wrestling, and was practiced by Lucian himself in the Lykeion at Athens.

Plato protests against right-handedness (Laws, 8-794). He demands that a trained wrestler, pankratiast and boxer should be able to use both hands equally, so that if his opponent should succeed in turning him around he could defend himself from the other side. The wrestler would sometimes endeavor to place himself behind his adversary by a quick movement, then wind his leg around his opponent's body and throw him. If successful in this attempt he would choke him.

Besides these tricks there were others with the fingers. For instance, a wrestler would grasp his opponent's finger-tips and dis-joint or break them, not letting go until the pain compelled his victim to declare himself conquered. This finger contest sometimes preceded the actual contest; and was oftentimes the only feature.

Sostratos of Sikyon was specially famed for this mode of contest; he was twelve times victorious in the Nemean and Isthmian, twice in the Pythian and three times in the Olympian games. Leontiskos of Messina, in Sicily, also practiced wrestling in this manner and gained his victory by breaking his opponent's fingers.

In ground wrestling the athlete even attempted to break his opponent's toes. Another special scheme which belonged to the standing wrestling was as follows: the contestant made a circle around himself and challenged his opponent to force him from his position. If the latter failed to do this, the victory belonged to the former. Especially noted in this style of wrestling was Milo of Crotona, the most famous wrestler of antiquity. When a mere boy he was victorious in the Olympic and Pythian games. Six times his head was crowned with the sacred olive of Olympia. Young men of the noblest families engaged in these wrestling contests. Plato, when a youth, is said to have been victorious in the Pythian and Isthmian games, probably in the wrestling match.

GYMNASTICS IN THE TREATMENT OF INEBRIETY.*

EDWARD COWLES.

THE purpose of this brief paper is to note some of the results of the use of gymnastic exercises and baths in the treatment of patients in the Hospital for Dipsomaniacs and Inebriates at Foxboro, Mass. The facilities for the work there are very limited: an ordinary day-room, designed as a sitting-room for thirty-five patients, is made to accommodate classes in gymnastics amounting sometimes to one hundred and fifty or more. The arrangements for bathing are likewise inadequate; the shower-bath is used, but only by crowding a few men at a time in a very small room.

In 1895, a systematic method was begun of recording measurements made by machines, loaned from the Boston Normal School of Gymnastics until the hospital could procure its own. The system and the charts were those of Dr. Enebuske.

During the succeeding year, ending September 30, 1896, very satisfactory progress was made under the competent direction of Mr. Hermann, a graduate of the Boston school. The general results are summed up by Dr. Hutchinson, the superintendent of the hospital, in his annual report.

The patients under treatment in this hospital are committed to it in the same manner in which the insane are committed to their special hospitals, by the Courts. In the cases of dipsomaniacs and inebriates, the exception is made that they may be detained in the hospital two years. But it has been the rule to grant in each case a leave of absence, at the end of six months, under conditions which require the return of the patient if he relapses into his drinking habits.

The patients who come into the classes are in many cases but recently recovering from acute alcoholism, or suffering from the

* This paper by Dr. Cowles, Superintendent of the McLean Asylum for the Insane, who is also a trustee of the Massachusetts Hospital for Dipsomaniacs and Inebriates at Foxboro, was read at the January, 1897, meeting of the Boston Physical Education Society.

effects of long continued intemperance. As they present themselves for gymnastic training they show faulty attitudes, weakened organs of circulation and respiration, imperfect muscular coördination, diminished will power, and comparative inability to concentrate and apply their minds, with slow response to stimuli.

The resident director has given his whole time to the work for five days each week. The general rule is that the exercise is followed by a bath. Most of the patients attend the classes each day, some only two or three days each week, some receive massage treatment, while others take the bath only, due allowance being made for the peculiarities of constitution and temperament, age, previous and existing diseases, injuries and present strength or weakness. The benefit accruing to the patients from the well-directed use of exercise and baths is indicated by the following observed symptoms: increase of appetite and power of assimilation, increase in weight, greater firmness of muscles, better color of skin, larger lung capacity, more regular and stronger action of heart, clearer action of mind, brighter and more expressive eye, improved carriage, quicker response of nerves, and through them of muscle and limb to stimuli. All this has become so evident to them that only a very few are unwilling to attend the classes and many freely speak of the great benefit derived. The accompanying chart shows the actual and comparative results obtained in the cases of all the patients, fifty in number, who were discharged from treatment between April 1 and October 1 of the year 1896, and who had completed a six-months' course of treatment. They are arranged according to their ages, beginning with the youngest. The tests applied are with reference to weight, lung capacity and muscular strength, each patient being tested before entering upon the class work and again just before leaving the hospital. The results of the first examination are shown in the fourth, sixth and eighth columns, while the gain or loss in either respect is indicated in the fifth, seventh and ninth columns. At the bottom of the chart are shown the average results obtained through the several tests. In one of the cases there was perceptible loss of strength. The man on entrance had great strength of hand and forearm, due to work as a steam-fitter, which diminished through lack of customary use, then at an early date he sprained an ankle and did no class-work for a full month, after which he took part in a half-spirited, listless manner.

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